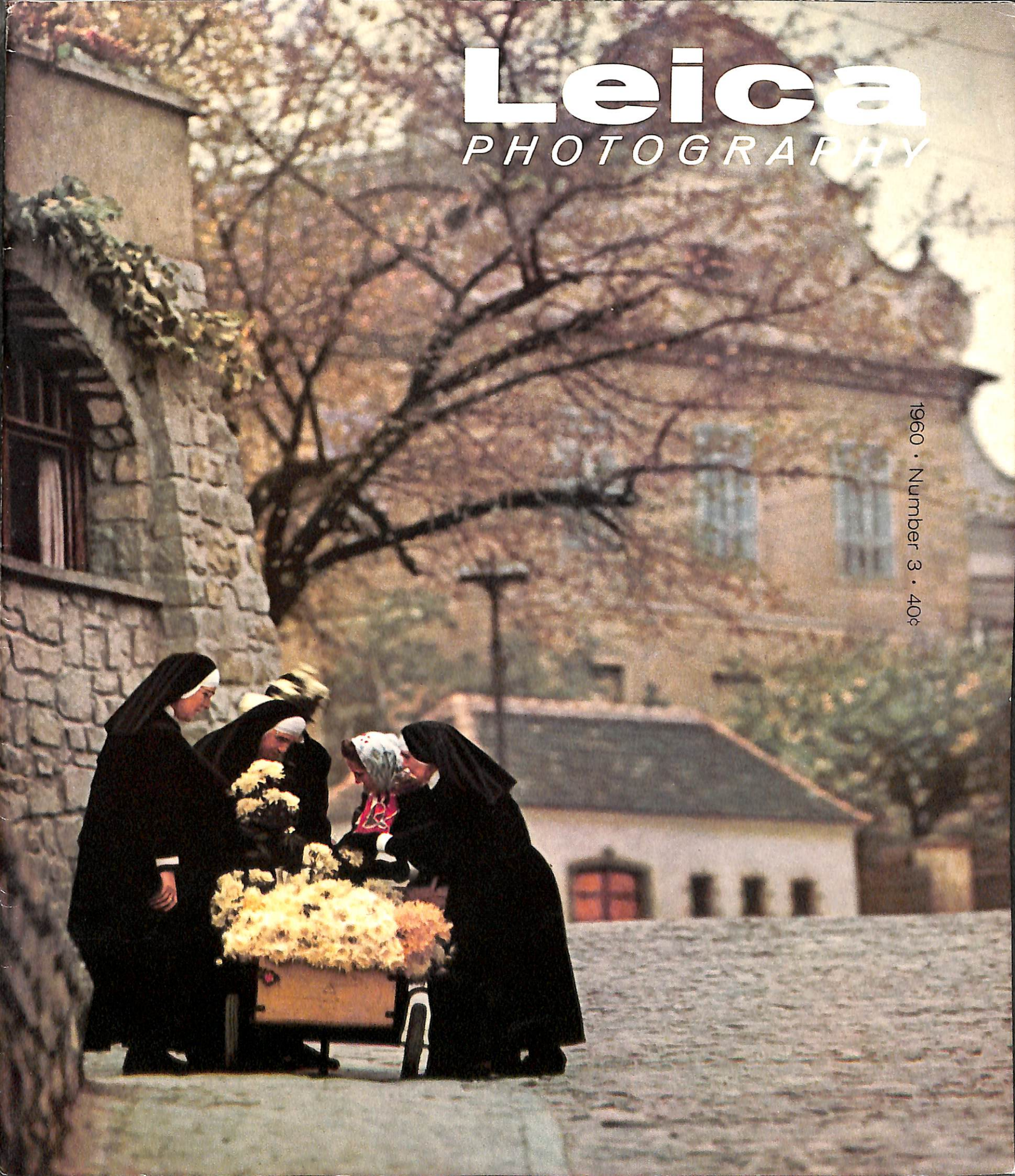
Leica PHOTOGRAPHY



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Leica PHOTOGRAPHY®

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contents:

ONE-MAN SHOW
PETER C. BUNNELL 4

FIVE WAYS TO MOUNT PRINTS
D. D. and E. Peter Schroeder 10

CONNOISSEUR'S CORNER
AN EYE-POPPING COLLECTION 13

THE NEW FAMILY ALBUM
Edward B. Hansbury 15

MY WALL-TO-WALL PRINT
Leroy A. Wagner 18

40X ENLARGEMENTS
F. J. Wood 19

FILL THAT FRAME!
Y. Ernest Satow 20

BATTAGLIA'S "FACE OF MISSOURI"
REVIEW AND PICTURES 24

ONE SCALE, MANY USES
Bruce Joseph 28

FOCUSING ON 30

COVER

Inge Morath

The ability to bring meaning to the simplest human activities is the mark of an outstanding photographer and the touchstone of personal style. So, it is not surprising that this well-known Magnum photographer, in observing and recording a commonplace incident on a quiet street in Grein, Austria, has translated it into a symbol of all the small, good things of life that sustain the spirit in a troubled world. Taken on Kodachrome with a Leica and 90mm lens, 1/50th at f/5.6.

INSIDE COVER

Harold Sands

This back-lit study of maple leaves uses shadows, silhouettes and over-exposed sky areas to produce a semi-abstraction. Printing on #4 contrast paper shortened the tone scale to enhance the effect. M 3, 125mm Hektor, Visoflex, f/8 at 1/100 on Plus-X.

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The editors are happy to consider original articles on photography with the Leica and photographs taken with Leica cameras and lenses. All manuscripts and photographs should be accompanied by stamped, self-addressed return labels.

one-man show

PETER C. BUNNELL, teacher

Young and talented Peter C. Bunnell is, at once, learning, teaching and practicing photography with energy appropriate to his 23 years and insight which belies them.

As a Graduate Assistant of Photography at Ohio University, he teaches freshman courses in Visual Expression and The Zone System of Planned Photography and also in the History of Photography. At the same time, he is pursuing his own studies for a Master's degree in Fine Art. His summers are spent doing historical research at George Eastman House in Rochester, N. Y.

Bunnell's photography began in the usual way — with pictures for school yearbooks, sports, and so on. It was his studies at the Rochester Institute of Technology that opened his eyes to the possibilities of the medium for "satisfying conscious and spiritual expression." Work with Minor White and Beaumont Newhall, at the Institute and at George Eastman House, heightened his search for the expressive potential of photography.

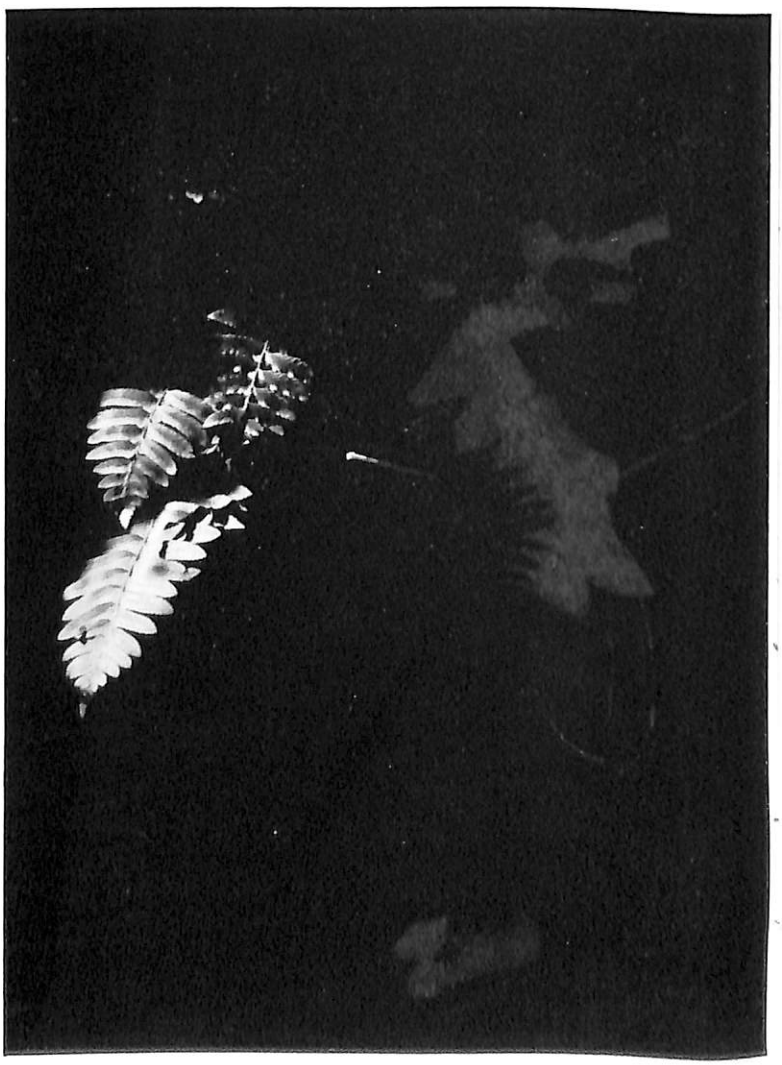
In this young artist's work, there is an echo of the approach of Minor White and Ansel Adams, the two photographers whose work he feels has influenced him most. But one also sees the growth of an individual style, and a fresh, insightful handling of his material, particularly nature subjects.

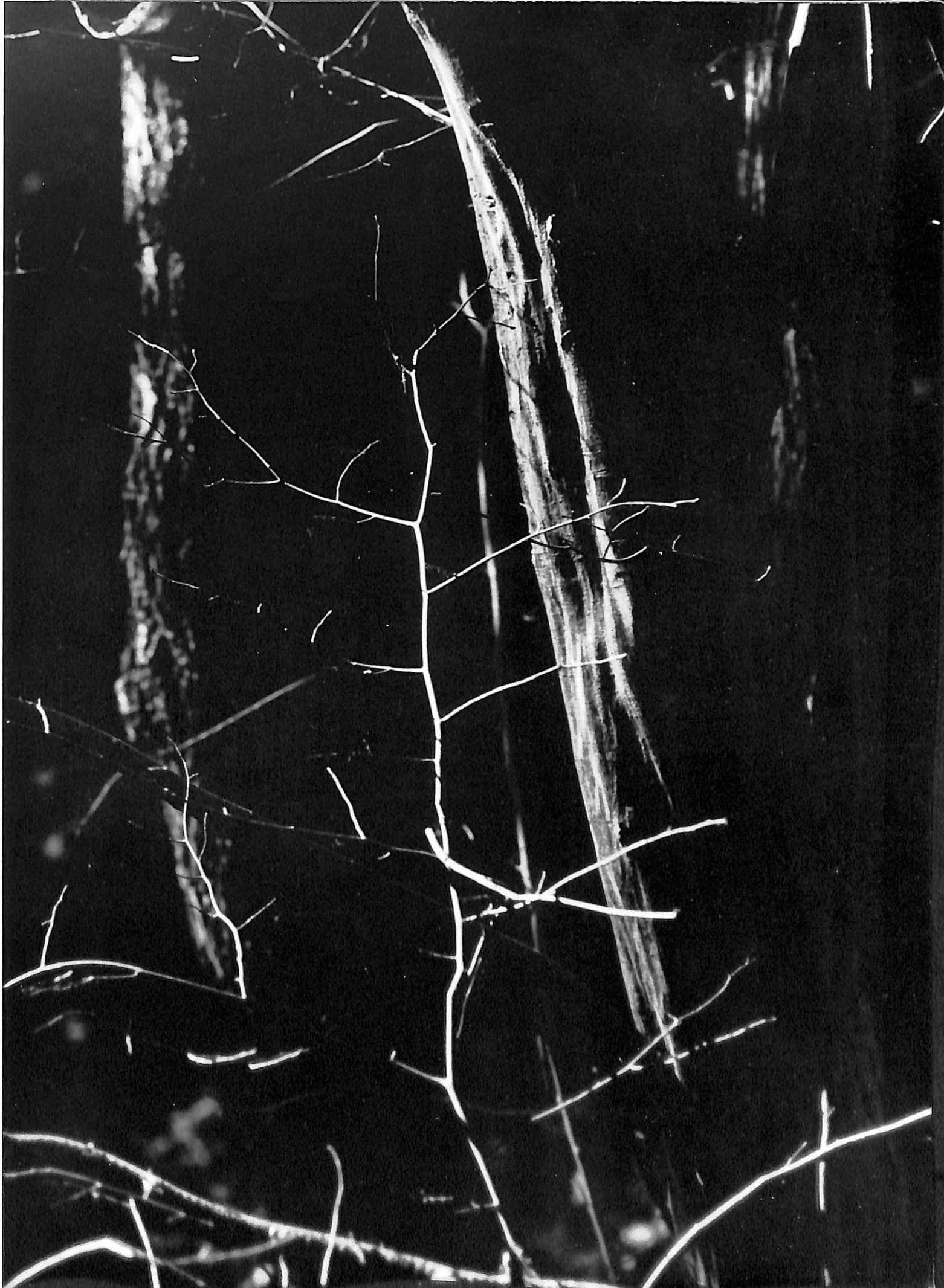
His approach to presenting his work is also refreshing. In sharp contrast to the usual eye-jolting, borderless 11 x 14's so dear to most working photographers, Bunnell's prints are small (5 x 7 or 8 x 10) and mounted on a 14″ x 17″ board. He feels that this allows enough room around the photograph to focus attention on it. The small prints also seem to have an ineffable delicacy which is quite appropriate to most of his subjects. Another way in which Bunnell prefers to present his work is through a sequence of related images. In it, he tries to combine words and photographs, in an effort to make a greater statement than either would do alone. Often the words are poetic quotations rather than conventional captions — "just enough to lead the mind into an approach for looking at the photographs."

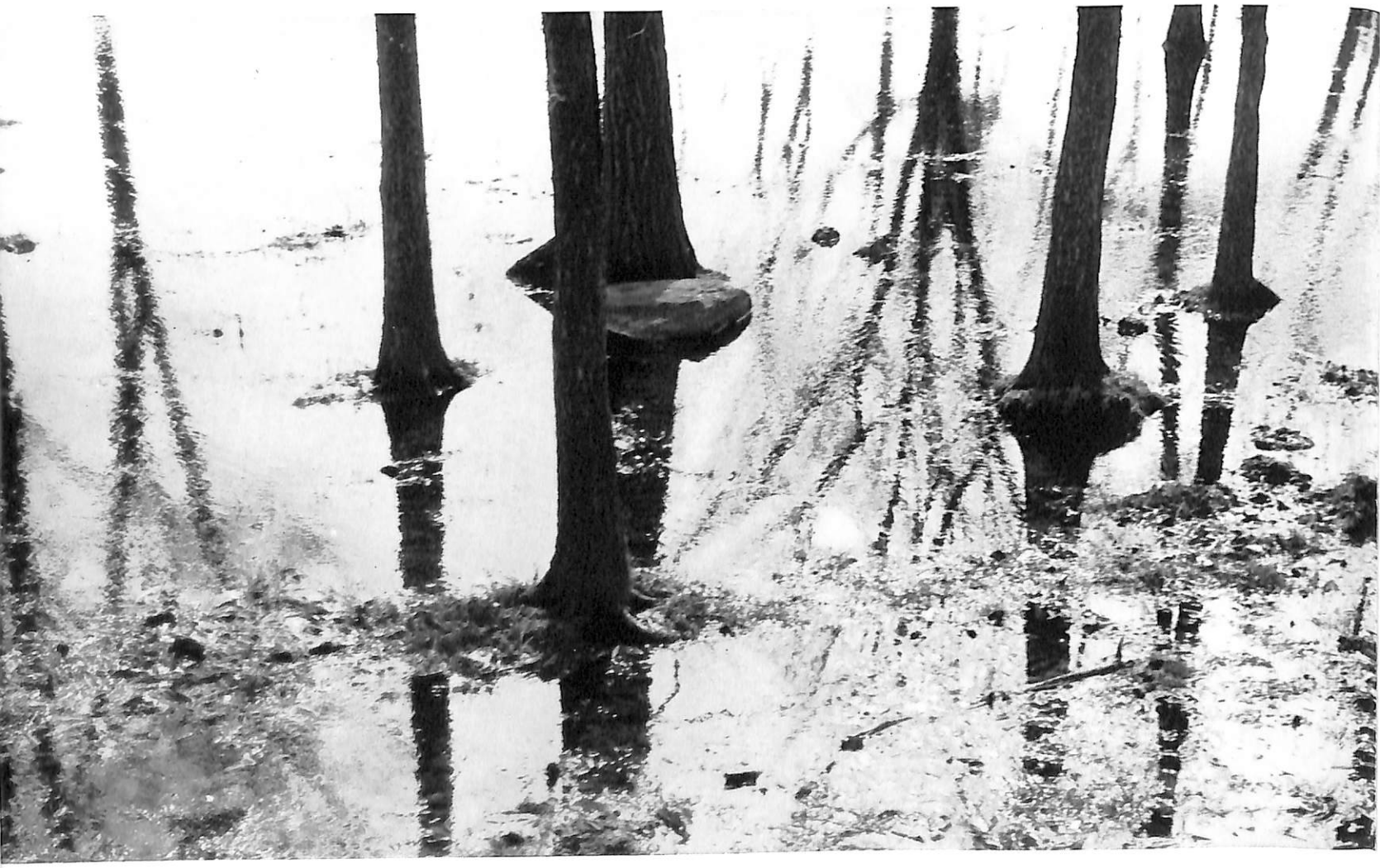
Of his approach to photography, Bunnell says, "I try to bring my inner feelings to a visual form, in order that others may find in these photographs not only myself — but a trace of themselves as well. These images are to be looked into — not glanced at casually."

All the pictures in this group were taken with a Leica IIIf and either a 50mm or 135mm lens.

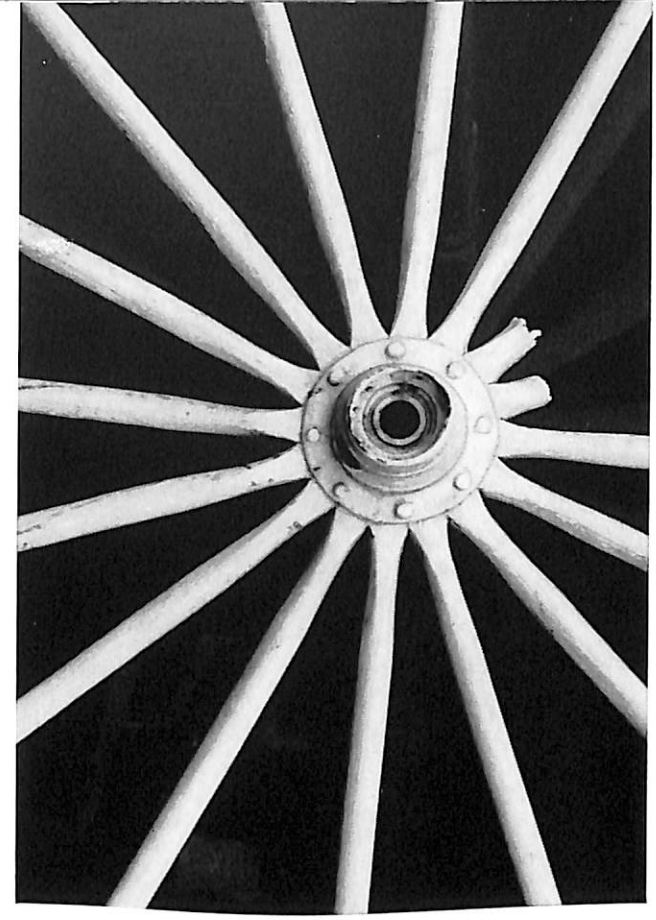
Two Images from "Song of the Bleeding Throat"







Swamp, Upper New York State



Wheel, Poughkeepsie, N.Y.

Spilled Paint, Lake Ontario

Athens, Ohio

one-man-show *(continued)*

Rochester, N.Y.

Blue Chicory, Nantucket Island

five ways to keep prints presentable

/ D. D. and E. P. Schroeder

the last step in print-making is the easiest

There is no sadder sight than a beautiful print curled into a tight roll which stubbornly resists your efforts to enjoy the picture. Sadder still is the fact that curled prints can easily be avoided, but often aren't. There are a number of ways to prevent print curling, most of them simple and inexpensive. Here are five for you to choose among. Each is effective, so just pick the one that seems to suit you best.

chemical solutions

The simplest way to flatten unmounted prints is to soak them in one of the print-flattening solutions available from your dealer. Old-timers used ordinary glycerine mixed 1:10 or less with water – a still-effective bath for the job.

Print curling is caused by the drying out of the gelatine emulsion which makes up the print. As it dries it contracts, and it contracts more than the paper base of the print. Result: curl. Thus, in damp summer weather, curling is less of a problem. But in dry winter air or steam-heated rooms, prints can roll themselves up like a college diploma.

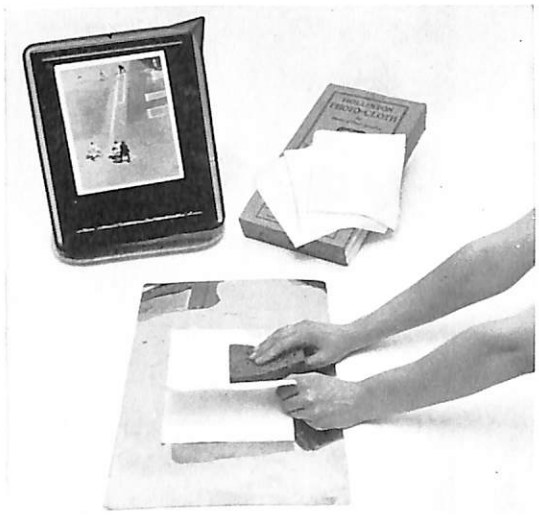
Print-flattening solutions simply substitute a less-volatile source of moisture than water in the gelatine of the emulsion to overcome dry-out.

To use a print-flattening solution, you merely dilute it with water according to the directions. Washed prints are soaked in the solution for 5 to 10 minutes according to the thickness of the printing paper. After the prints have been soaked, the excess flattening solution is drained and sponged away and the prints are dried in the usual way – blotter roll, ferrotype or electric dryer.

muslin backing

Another anti-curl method for finishing prints is to back them with a muslin-like fabric which not only helps to counteract curling tendencies, but adds physical strength to the print.

For this you will need a special cloth backing (one type is Holliston Photo-Cloth made by the Holliston Mills, Inc., 70 West 40th St., New York, N. Y.), a sponge and a clean, smooth surface such as a ferrotype plate on which to work.



WET SPONGE smooths cloth backing, removes air bubbles.

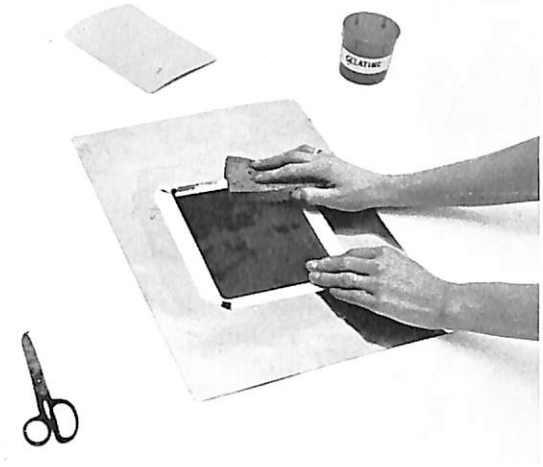
With a sponge, the backing cloth is simply smoothed, glue-side down, onto the back of a wet print and the backed print immediately put into the dryer.

gelatine on hardboard

Somewhat more trouble than the preceding methods, but a most durable and attractive solution to the curling problem is the mounting of the prints on thin hardboard (such as Masonite) with a gelatine adhesive. Your tools for this will include a ferrotype tin or other smooth work surface, scissors, plastic sponge, small sheets of hardboard, some brown wrapping paper, a box of unflavored gelatine and a container to hold the diluted gelatine.

Here is how to proceed:

1. Dissolve one envelope of gelatine in ½ cup of boiling water in the container you have provided. Stir until gelatine is completely dissolved.
2. Cut a mount from hardboard about an inch shorter in both dimensions than the print itself. For instance, an 8 x 10 print would

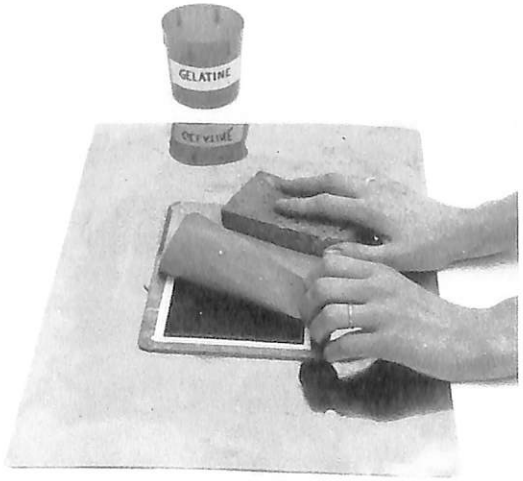


SLITS permit rounded print corners on hardboard mount.

call for a 7 x 9-inch mount. The corners of the board should be rounded for best appearance.

3. Cut off the four corners of the print. (About ½ inch on an 8 x 10.) Then cut into the trimmed corner slightly, making three or four parallel slits. These make it easy to fold the print over the rounded corners of the hardboard mount.
4. With your sponge, swab a thin layer of gelatine on the back of the print and on the smooth side of the mounting board.
5. Put the print face down on your work surface. Then place the mounting board, gelatined side down, in the center of the back of the print. With the sponge, apply pressure with a wiping motion to press the hardboard firmly on to the print. Inspect the face of the print to be sure no air bubbles have been trapped between it and the mount. If any appear, smooth them away by wiping with the sponge.
6. Next, sponge some gelatine on the back of the hardboard mount and wrap the sides of the print tightly over the edges of the mount, smoothing them against the gelatine. The slits cut in the corners of the print can be overlapped on the back of the mount, which makes the print follow the curve of the mount corner and gives an elegant appearance to the final print.
7. The final step is to swab gelatine on one side of a piece of brown paper and the back of the hardboard and place the paper on the back of the mount, covering the turned-over print edges. Then swab a thin layer of gelatine on the back of the brown paper, applying pressure for good adhesion. Dry the mounted print by leaning it against the wall so that air can reach both sides of it.

WRAPPING PAPER backing adds finishing touch to mount.



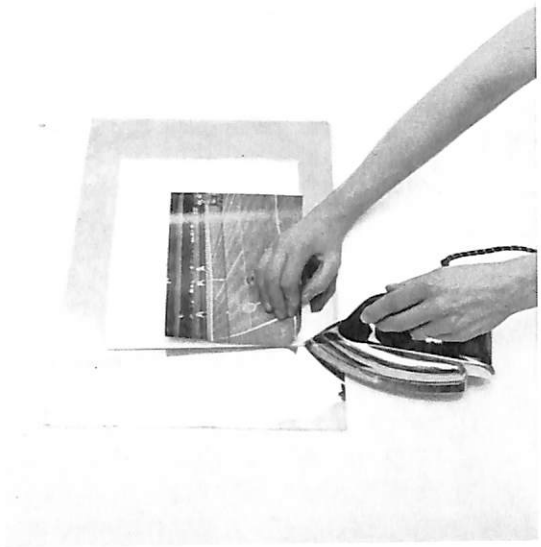
dry mounting tissue

Dry mounting tissue has the virtues of being clean and easy to use. It is especially good for mounting prints on large exhibition boards for display, but can also be used for borderless, or "bleed" mounting.

As you may have gathered, prints mounted by this method are first dried. You will need a mounting board which can be anything from a handsome, toned and specially-surfaced board made for the purpose to an old shirt cardboard which can be used to back borderless prints.

MEDIUM-HOT IRON is used to tack dry-mounting tissue.

You will also need a box of dry mounting tissue of the right size for your print, an electric iron, some brown wrapping paper (to protect the print from the hot iron during mounting) and a smooth, heat-resistant work surface.



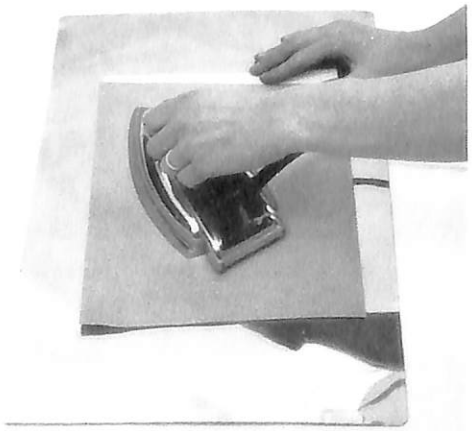
TACKING PRINT to mount requires careful prealignment.

For those who do a great deal of dry-mounting there are elaborate electric irons and presses available, but for casual use, an ordinary home electric iron is good enough.

The steps in dry mounting are three:

1. Put the print face down on the work surface (ferrotype tin, metal table, etc.) with a sheet of dry-mounting tissue on top of it. Tack the tissue to the back of the print by making an "x" on it with the hot iron. This melts two narrow strips of the tissue which hold print and tissue together when the "x" cools.
2. Put the print face up on the mounting board and tack the corners of the tissue to the mounting board with the tip of the iron.

FINAL BONDING is done with whole surface of the iron.



3. The final step is to put a sheet of brown wrapping paper (for protection) over the face of the print and then to run the iron (on low or medium heat) across the wrapping paper with much the same motion used in ironing a handkerchief. The hot iron softens the entire area of the dry-mount tissue without harming the print.

rubber cement

This method has many of the virtues of the dry mounting tissue system and is somewhat less expensive, although a bit messier to use.

To use it, you need only the dry print, the mounting board and a bottle of rubber cement.

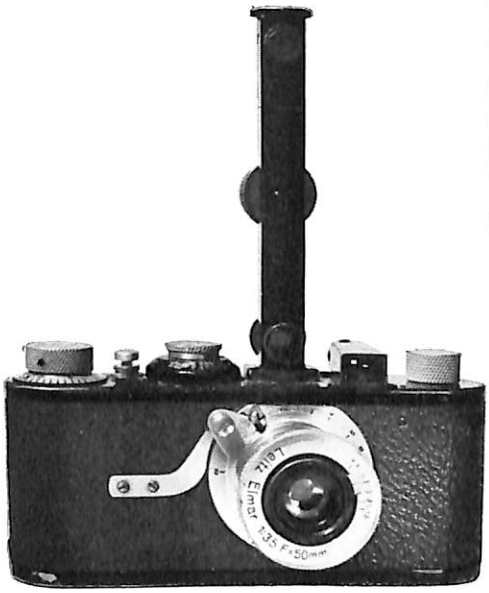
Using rubber cement for mounting is simple:

1. Swab a thin layer of cement on the back of the print and the face of the mount. Let both dry thoroughly.
2. On the mounting board, carefully measure and mark with pencil where you want the corners of the print. It is important to locate these beforehand, because the two layers of rubber cement will stick instantly and tightly when brought into contact.
3. Lay a sheet of wax paper over the cemented area of the mounting board and then place the print on top of the wax paper. Slide the print around until its corners are properly located on the pencil marks you made previously. Holding the print in position, carefully slide the wax paper from between the print and mount until it clears the upper edge of the print by about ½ inch. Then, being sure that the print is still in the right position, press the exposed print edge down on the cemented mounting board. Board and exposed print edge will stick together and you can then slowly slide the wax paper the rest of the way out from between print and mount, pressing the two together as you go. Be careful that print and mount are in perfect contact. You will not be able to shift the print around if bumps or wrinkles appear. Any excess rubber cement on the mount or print can be easily rubbed off with a clean rag after the cement is dry.

Any one of these final steps toward making your prints attractive and durable requires less skill and time than any other part of picture making. Try one and see what a difference it will make in your photographs.

connoisseur's corner

Photos by Simon Nathan

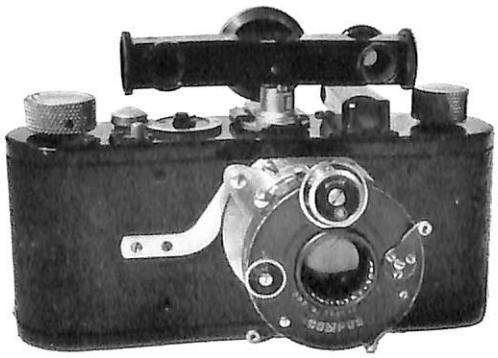


MODEL I (Model A) was first Leica marketed. Note 50mm Elmar f/3.5 and detachable, non-coupled vertical rangefinder. Lens not interchangeable.

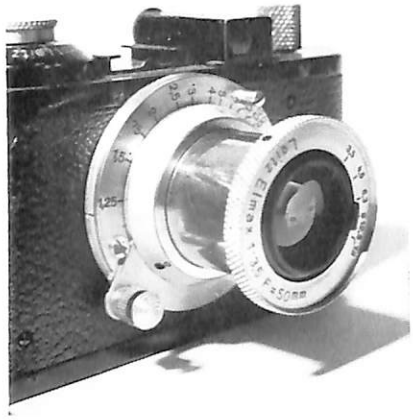
The connoisseur with the covetous smile is Robert M. Schwalberg, of our own Editorial Board, who obviously never gets enough of a good thing.

Bob's collection of Leica equipment is well on its way to becoming fabulous, and even boasts some items which were never in production – like an interchangeable 50mm Elmax lens, for instance. This was a non-interchangeable lens on some early Leicas, but a few were converted to interchangeable mounts when owners of Model I Leicas had the features of later models added to their cameras. Practically every piece in the collection is in working condition and is used from time to time for picture-taking by its owner. A few of them appear here.

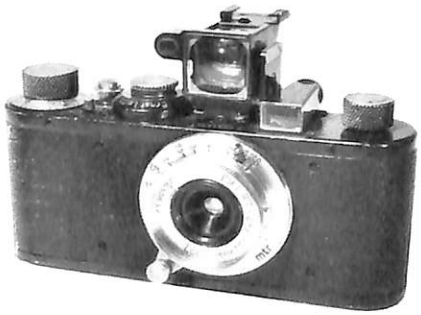
MODEL I with Compur shutter (called Model B in U.S.) is a rarity. About 1500 were made through 1930. Shutter had automatic slow speeds.



ANOTHER RARITY was the Model A with 50mm Hektor f/2.5 lens, which was later produced in interchangeable mount.



NON-EXISTENT LENS, in theory, is this interchangeable *Elmax* 50mm, which was never in production. Lens was ancestor of the Elmar, appeared on very early Model A's. This one, shown on a Standard (Model E) was apparently converted at some time.

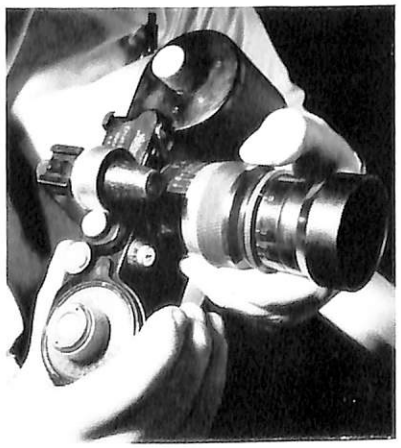


EARLY WIDE-ANGLE, 28mm Hektor f/6.3 called for convertible viewfinder which also served 35mm lens when square front lens was pivoted aside.

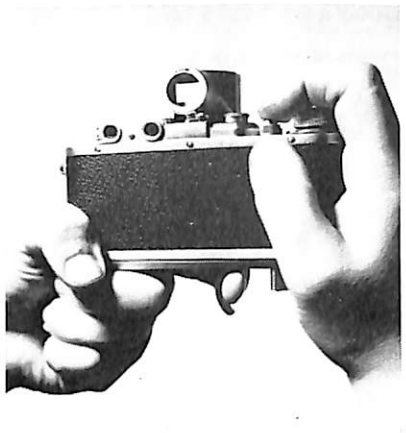
BELUN 1:1 copying device, here shown on Model C Leica was produced until 1959. Focus and framing were automatically fixed for life-sized reproduction.

MODEL III (Model F) wears the early high-speed lens, 50mm Xenon f/1.5 Model F was first Leica with built-in focal-plane slow speeds to 1 second.

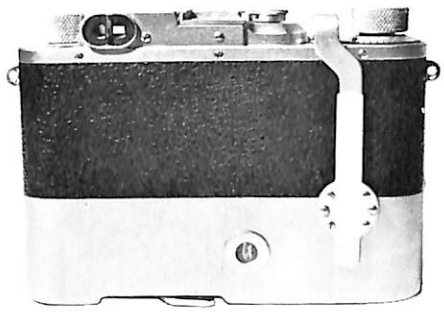
FIRST COUPLED-RANGEFINDER MODEL was the II or D, which appeared in 1932. A few were produced as late as 1948.



250-EXPOSURE Model FF (Reporter) was special-purpose Leica with large cassettes. Two cassettes were used, one feeding into the other without rewind. Lens is 73mm Hektor f/1.9.



EARLY LEICAVIT baseplate trigger rapid-winder is shown on Leica IIIa, (G). Later designs of Leicavit are available for current models except M 3.



MOTOR DRIVE for the Leica IIIb, available over 20 years ago, had external linkage to shutter release button.

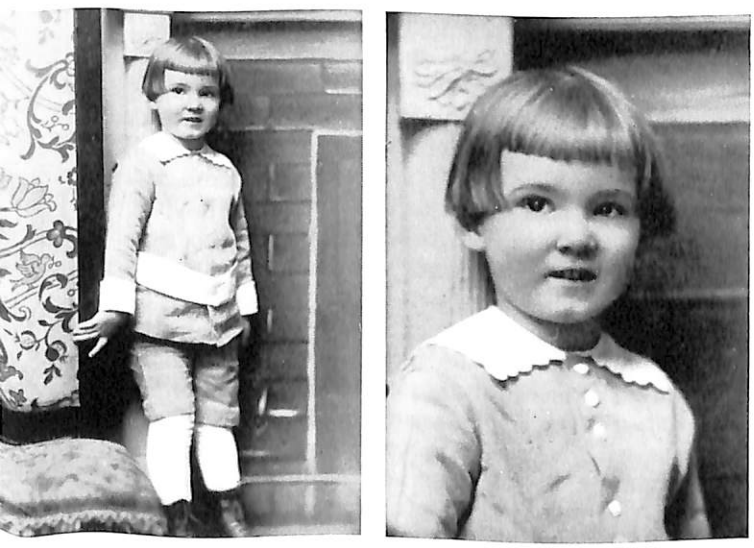
MOTORIZED IIIc used another version of Leica Motor in 1940. Linkage was internal, shutter and motor were operated by lever in front.

the new family album / *Edward B. Hansbury*

update old snapshots for projection

Hidden away on a dusty closet shelf, no doubt, is your old "Family Album," complete with pictures of Grandma and Grandpa on their wedding day, Father in his baby "dress," Mother in her cute curls and pinafore, and yourself up to the tender age of "a few years ago" when you stopped shooting black-and-white pictures and became a color slide addict.

Why not dust off these amusing and sentimental pictures and modernize them as transparencies that you can show in your slide projector? All it takes is a little interesting work with your Leica and a few accessories.



FULL AND CROPPED COPIES show the possibilities for improvement when making slides from old prints or negatives.

My "Wonderful Yesteryear" slides of family and friends have proved so popular that additional old photos are constantly being offered to me for inclusion in the series. And what started out as an experiment is rapidly becoming a comprehensive family history on film.

Appropriate titles and date slides can be added following the general instructions in my article on "Title Slides" in Leica Photography, Volume 12, Number 4, 1959.

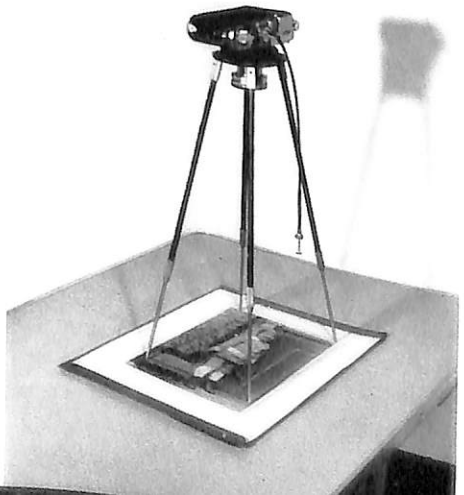
getting set to copy

Let us first consider the old pictures where negatives are available. The equipment I prefer for making these negatives into slides is the Visoflex I, with the Bellows Focusing Device and the Hektor 135mm lens. With this combination the copying ratio runs from 1:1 up to coverage of the largest negative that you have. A regular contact printer (with a piece of opal glass between the bulb and negative to diffuse the light properly) is turned onto its side on a sturdy table to provide a target for the above equipment, which is mounted on an elevator-type tripod. Mask the glass surface of the printer with opaque black paper which has had cut into it an opening appropriate to the size of the negative being copied, as shown in the table:

FILM NO.	ACTUAL SIZE	MASK OPENING
135	1" x 1½"	31/32" x 1 15/32"
127	1⅝" x 2½"	1 9/16" x 2 7/16"
620	2¼" x 2¼"	1 15/32" x 2 3/16"
620	2¼" x 3¼"	2⅛" x 3 3/16"
616	2½" x 4¼"	2 7/16" x 3 11/16"

The mask openings conform to the 1 x 1.5 proportion of 35mm film and, of course, cause some cropping of the original negatives. However, most negatives, especially those taken by older cameras with small viewfinders, are actually improved by the cropping. Locate the camera so that the mask opening, seen through the Visoflex magnifier, just fills the ground glass. Tape the negative over the mask open-

IN COPYING PRINT, collapsible 50mm Summicron and BOOWU device are used. Lens is stopped down to provide long exposure.



ing so that the portion desired on the transparency is illuminated.

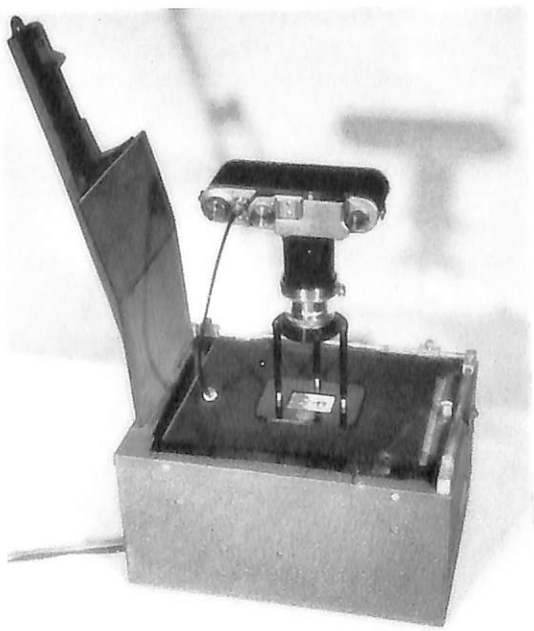
To make 1:1 copies of small areas without any focusing or adjusting, I have used the BELUN with the 50mm Elmar lens or the BELUN HESUM with the 50mm Summitar lens. In this case, the contact printer can be used right-side up. *(Both of these discontinued devices have been replaced by one versatile unit – the BEOON – which makes 1:3, 1:2 and 1:1.5 copies as well as 1:1 . . . Ed.)* Of course this only covers a field of 1" x 1½", but it will be very satisfactory for an amazingly large number of closeups from larger negatives that have unwanted backgrounds. Though the base of the device provides its own mask, it is advisable to cover the rest of the contact printer surface to prevent possible flare in the camera.

film and exposure

Kodak Fine Grain Positive film (35mm) is a low-speed film that is excellent for our purpose. However, it is available only in 100 foot rolls and must be loaded into Leica film magazines either in a daylight film loader, changing bag or darkroom.

Since exposure depends upon the intensity and distance of the light source, and since individual equipment varies, exposure will be partly a matter of trial and error until you have a little experience. It is difficult to take accurate meter readings when you are working with negatives with the light coming through them; large light areas (dark areas on the transparencies) will give high readings. Holding the meter three or four inches from the negatives helps

1:1 COPIES can be made with BELUN device (now discontinued) or the more-versatile new BEOON.



IRREPLACEABLE PICTURES can be preserved as transparencies.

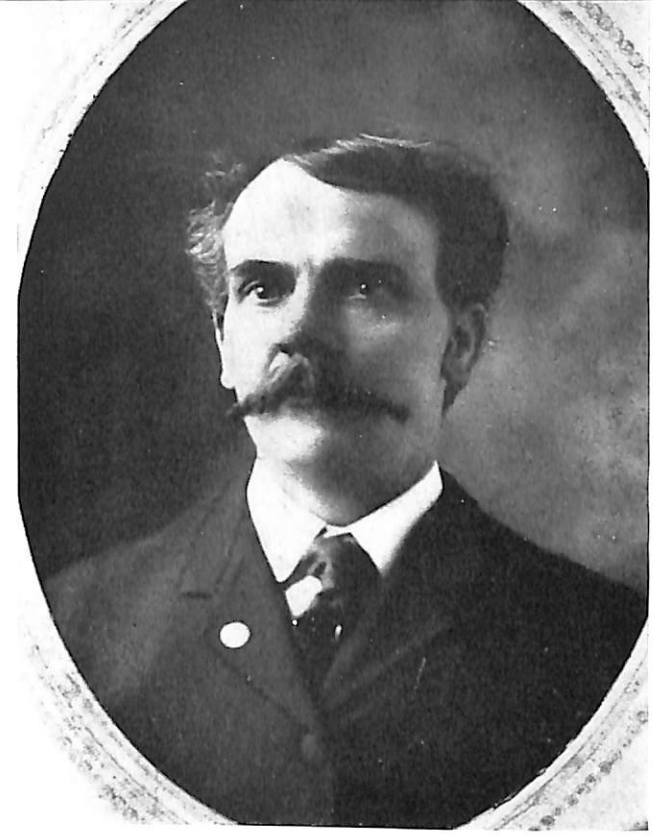
to equalize the light somewhat. With a 100 watt frosted bulb in a 5" x 7" contact printer, an exposure rating of 4 on the A.S.A. scale of a Leica Meter and reading the "poor light" index mark (without using the booster cell or incident light adapter) a trial exposure of 8 seconds at f/8 is indicated for a medium contrast, medium density negative. Keep in mind that 1:1 copies require 4X the normal exposure because of extra lens extension. When working with the Visoflex and Bellows at 1:1 or other ratios, you can read off the necessary exposure factor from the Bellows track. Additional exposures a full stop above and below the one indicated should be made on the trial roll, with normal developing. I prefer a long exposure with a small diaphragm opening to minimize variations in meter readings and timing. An accurate timer is most helpful and you should keep records of your trial exposures and the results for future reference. Always use cable release to eliminate movement of the camera during exposure.

Development in Dektol, according to directions, produces very satisfactory results and ordinary developing equipment is all that you will need.

copying prints

When no negatives are available, you can easily copy old prints. In this case the light source is on the same side of the subject as the camera and a different procedure is followed.

I use two reflector floods, mounted on light stands or other suitable fixtures, one on either side of the



ORDINARY LIGHTING and camera equipment do the job for you.

camera and arranged so that the light axes are at 45° to the camera axis and the light cones overlap on the material to be copied. Uniform light distribution over the entire subject is most important; check it carefully with your light meter to avoid "hot spots" and dark corners.

The Visoflex I-Bellows combination can be used here, also. Unless the print dimensions are in the same 1:1.5 proportion as the 35mm format, you will either have to crop in composing the slide or mask the finished slide.

The BOOWU, with any 50mm lens, can be used for copying if the picture is about 4" x 5" or larger. *(An adapter #16,508, is needed when the lens unit of the rigid or Dual-range 50mm Summicron is used on the BOWUM unit for "M" model Leicas . . . Ed.)*

In copying prints, you have a choice of films — Kodak Direct Positive Panchromatic film, a fast, fine grain reversal film which, however, is rather fussy to process, or Kodak Panatomic-X film on which you can make copy negatives from which to print on Kodak Fine Grain Positive film as before.

The Direct Positive film, Tungsten-rated at E.I. 64, is available only in 100 foot rolls and you must load your own magazines. Processing is a special procedure with packaged chemicals sold only by Kodak dealers.

Panatomic-X film is sold in 20 and 36 exposure magazines, as well as in bulk. Development in D-76, according to directions, is easy and very satisfactory. The new A.S.A. rating is 40.

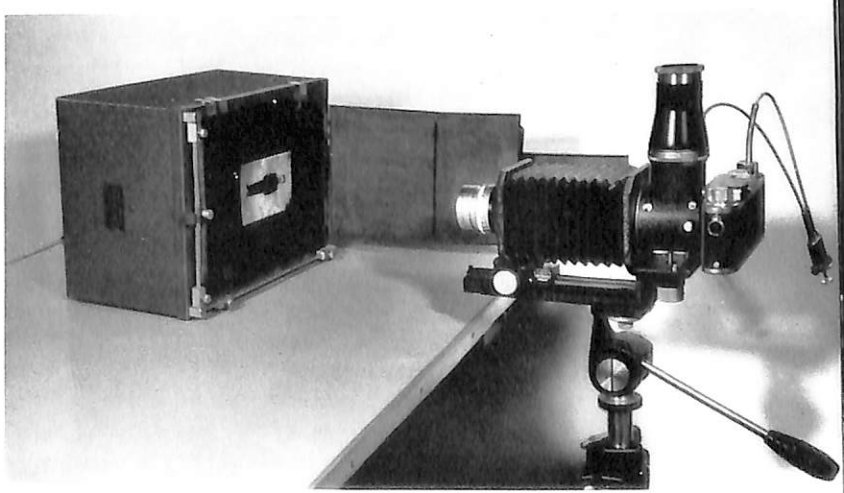
The "copy negative" method has a lot to recommend it, even though it requires two operations, as it allows for future reproduction of old prints that may be available only on loan or in a state of deterioration. Filters can be used to eliminate or minimize stains, increase contrast, reduce reflections, separate colors, etc. And having a negative is especially handy in filling requests for copies of slides. These will come from your family and friends who are also photo fans. And it seems easier to me to work from 35mm negatives, since I can use a 1:1 copy device without a lot of set-up work.

Finished transparencies, viewed by light reflected from a piece of white paper, should appear somewhat dark and overexposed but full of detail. Projection with 300 or 500 watt lamps will bring out their full beauty. But remember that the finished slides can be no sharper than the original pictures and that projection will magnify defects that might not have been apparent in the original negative or print. Either mount the slides in cardboard readymounts or bind them in paper masks and 2" x 2" cover glasses.

Another project you may enjoy with the black-and-white slides is a "Yesterday and Today" series. Copy old photos, newspaper or magazine clippings, etc. showing items of particular interest to you — your town, church, school, waterfront, etc., and then take current photos, either in color or black and white, of the same subjects.

For additional information on black and white slides and copying, I can recommend the Kodak data books "Photographic Production of Slides and Filmstrips" and "Copying."

COPYING A NEGATIVE with Visoflex, Bellows and 135mm Hektor lens. Negative is on contact printer which is laid on its side.



my wall-to-wall print

/ Leroy A. Wagner

Mural-sized blow-ups from Leica negatives used to be a job for specialists only. But we recently heard from two photographers, both amateurs, who have been making murals in their own cellars. Their stories will give you an idea of how to tackle a photo-mural of your own . . . Ed.

As manager of the Camera Mart in Baltimore, I was wondering what to do with a 40″ x 10′ roll of enlarging paper which a customer had ordered but never picked up.

As an enthusiastic Leicaman, I had a sudden idea. Why not blow up a Leica negative to see just how big a print we can make? It would be a good test of what can be done by an average amateur in his own darkroom. One of our salesmen, Don Burl, was immediately enthusiastic and we tackled the problem together.

After some technical research we decided to shoot the city skyline from across the harbor. In the afternoon it was flatly lit, interesting and full of detail, and a subject which would not vary during the time needed to make a number of exposures.

film-developer combinations

We planned to expose two rolls of film in a Leica M 3 with 50mm Dual-Range Summicron. There would be two series of groups of three negatives on a roll of Adox KB-14 and one series on a roll of Agfa FF. The three-picture groups were our insurance against dust, scratches and handling. Each group would be varied from the other by 2/3rds of a stop, with constant shutter speed.

The exposed KB-14 was cut in half, and one half developed in Agfa Ultrafin, the other half in FR X-22. The entire roll of Agfa FF was developed in Ultrafin. This gave us three sets of identical exposure series from which to choose the "perfect" negative for the mural. Processing temperature was held to 68°F ± ½° throughout.

Test prints showed that the KB-14/X-22 combination gave the most desirable sharpness and contrast. And, since our paper was #3 contrast, we chose the thinnest negative.

We did the enlarging in the cellar *outside* the darkroom because the darkroom was our paper safe! Naturally, we had to use the enlarger horizontally to get a long enough throw for the tremendous enlargement, and so we lashed it on its side to a bench saw weighing 200 lbs. for steady support. Final tests showed eight minutes at f/8 to be proper for the full-sized mural.

SERENDIPITOUS MURAL, made in the author's cellar, began when a customer failed to claim a 40-inch by 10-foot roll of paper.

making the mural

We held the unrolled enlarging paper to the concrete cellar wall with masking tape, which held tightly throughout the eight-minute exposure.

I had made processing troughs from cardboard supported by wooden ends in a "V" shape. They were lined with two layers of polyethylene plastic sheeting as waterproofing. Processing took four of us. Two held the print under the solution and two provided the see-saw action needed to run it through the solutions. But take my word for it – nothing can diminish the thrill of seeing a giant print appear in the developer.

We washed the fixed print in the bath tub, giving it three changes of water and then leaving it overnight. Next morning I spread it out on the front porch for a half-hour rinse with the garden hose. Handling it carefully, my wife and I hung it over the doors of the shower stall to dry.

mounting

I decided to mount my giant on ¼″ plywood. So, armed with wallpaper paste and a papering brush, my wife and I pasted the print and smoothed it out on the plywood – only to have air bubbles show up between the print and the mount! I lay for hours beside the print, squeezing out the bubbles with a four-inch print roller.

In about two hours, the paste began to set up and a new headache developed. Differences in the thickness of the paste layer became very evident. But I found later that this condition disappeared when the paste dried thoroughly.

A simple frame of lath completed the work and I soon had the print – nearly eight feet long – on display at the Camera Mart where it is constantly commented on by curious and sometimes skeptical photographers.

40X enlargements are a family affair / *F. J. Wood*

Making large marine prints from Leica negatives has interested me for years. During my work in marine advertising, 16″ x 20″ and 20″ x 24″ enlargements were commonplace, but I had an opportunity to make a much larger print – 40″ x 60″.

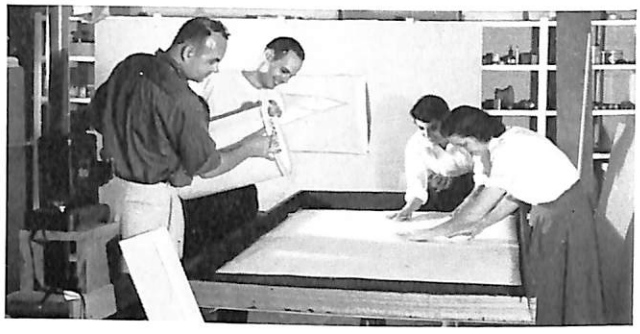
As a result of an advertising campaign, I had a number of excellent sailboat pictures made with a Leica and 50 and 90mm lenses. So, as a booth decoration for a Motor Boat Show, I decided to use a 40″ x 60″ print made from these negatives. They were on Panatomic-X processed in UFG.

Several of my Leica-using cousins and I meet once a month for either darkroom work, slide projection or photographic bull sessions. The big print became our club project for one meeting. Prior to the meeting I had purchased Kodak Polycontrast paper 40″ x 30′ and constructed a single tray 4′ x 8′ on a ¼″ *marine* plywood base. This tray had a 4″ mahogany lip glued and nailed around it and was coated with Pro-Chem air-curing neoprene *(available from Pro-Chem Co., Inc., 132 West 31st St., New York City, and through photo dealers – Ed)*. There were several drains in the corners of the tray with ordinary sink stoppers in them.

My old Leitz VIII-S 300 watt projector with a 90mm Elmar camera lens and a film strip carrier was placed in the center of the basement on a table. The film strip carrier proved perfect as a negative carrier and behind it we placed two sheets of Kodapak diffusing screen. We also placed the Polycontrast filters behind the negative to insure optimum contrast. The projector was directed at a 4′ x 8′ sheet of wallboard tacked to the basement wall. A careful job of aligning (both horizontally and vertically) was done, and pencil marks made to indicate dimensions.

Using polyethylene waste baskets, garbage cans, etc., for containers, we mixed nine gallons each of developer, short stop, and hypo. Test strips were developed in the polyethylene buckets so that the same solutions at the same temperature would be used for both tests and final print. When a satisfactory exposure had been found, the roll of paper was laid out in the still-dry tray and cut, allowing 6″ at each end of the print for handling. This paper was tacked to the wallboard and the exposure made.

One of the advantages of using the Leitz projector was the extremely short exposure time needed. Even with the lens stopped down two stops, we needed to



OUTSIZE TRAY holds nine gallons. Four drains speed drainage.

expose only fifteen seconds. The exposed paper was then tacked lightly to the bottom of the tray. Developer was poured in, and six people, spaced around the tray, agitated it. After development, the tray plugs were removed and the solution returned to its containers. Short stop and hypo followed the same procedure, with hypo eliminator used as a prewash. A garden hose was run into the tray to give the final wash, with the wash water drained out into a trap on the floor. The large drains for rapid removal of solutions were important.

Wallpaper paste was used to mount the print on wallboard backed with wooden strips to prevent warping. The print was squeegeed into contact with damp viscose sponges, edges wrapped around to the back of the mount and tacked.

If you pre-plan thoroughly and work carefully, making a 40″ x 60″ or even larger print from a Leica negative is scarcely more difficult than making a smaller print – yet it will provide you with a unique home or office decoration.

BOAT SHOW BOOTH displays author's do-it-yourself Leica mural.

fill that frame! / *Y. Ernest Satow*

compose in the finder, not the darkroom

FULL-FRAME PICTURE taken with 50mm lens shows excellent contrast, gradation, resolution and grainlessness, but includes much unwanted detail. Cropped-out area (page at right) is a far stronger portrait. But, as an approximately 20X enlargement of a section of the original negative, it shows graininess and loss of resolution when seen from normal viewing distance.

"If you start cutting or cropping a good photograph, it means death to the geometrically correct interplay of proportions. Besides, it very rarely happens that a photograph which was feebly composed can be saved by reconstruction of its composition under the darkroom's enlarger; the integrity of vision is no longer there."

This statement by Henri-Cartier-Bresson, which he made in his book, *The Decisive Moment,* though it may perhaps be inflexibly rigid, should be a guide to all photographers. Too often, one sees a 35mm user who grabs a shot and takes care of composition later on by cutting, cropping, straightening and tilting. The result is always less-than-top quality. Perhaps he is copying a big-camera photographer, who does, and, indeed, can often afford to do this in order to get a news shot. But, as a Leica photographer you should take pride in your craft as well as your camera. As you are studying your subject through the viewfinder, apply all your creative faculties in determining composition, angle and your own personal interpretation. And only after you finally fill the 35mm frame precisely should you press your shutter release.

Here is why it is important to fill the frame with the picture. The first consideration is technical quality. Today, we have a tremendous number of superb lenses, films and developers. And, by combining these tools skillfully, we can produce pictures with quality that was never before thought possible. However, 24x36mm is still a small negative area, and, to take advantage of your Leica to the fullest extent, you must use the entire frame.

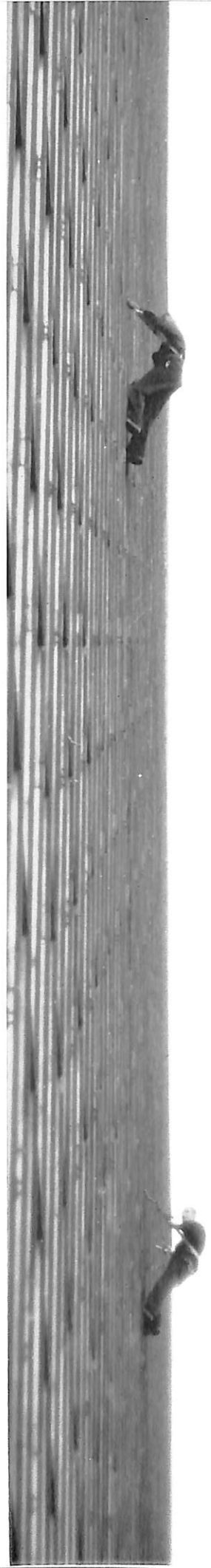
By using the entire negative area, it is possible (and not too difficult) to make mural-sized prints (see pages 18 and 19) which are sharp and reasonably grainless. But exposure, development, focus and camera steadiness must be faultless. What's more, such giant prints are normally viewed from distances of several feet. And viewing distance is a key consideration in judging apparent quality, since your eyes will not detect graininess and softening of outlines at six feet as easily as they do at 10 or 12 inches. Thus, a 25x37-inch full-frame enlargement, viewed on the wall from two or three feet, will appear crisp with smooth tone areas. But an 8x10 inch print from

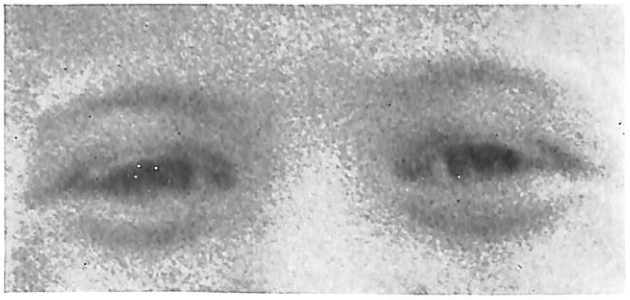
PLANNED IN THE FINDER, this full-frame picture required only 9X enlargement for 9 x 13-inch print. Different picture of same subject (right) used full long dimension of negative, required no greater enlargement for final 3½ x 13-inch print.

a small section of the negative which represents the same amount of enlargement, and viewed from the normal 10-or-so inches, will appear grainy and show loss of gradation. This is specially true with casually-made negatives and fast films.

optimum quality

Now, suppose you are using ultrafine-grain film such as Adox KB 14 in combination with Tetenal Neofin Blue. By filling the frame precisely, you will take every advantage of all this film offers: superior detail, ultra fine grain and maximum resolution. At the same time, your printing time will be short because of the relatively small enlargement involved. And this, in turn preserves good print contrast. The opposite will happen when you start raising your enlarger head to lift out a small negative area. Contrast will drop, exposure time will lengthen greatly and you will need to shift paper grades or filters.





24X BLOWUP from negative overexposed two stops shows extreme loss of quality. All illustrations are on high-speed film; slower films would show less, but noticeable loss.

Naturally, with fast films, the need to fill the frame becomes more acute, because as you increase the size of enlargement, graininess becomes more and more intolerable. In color photography, you will have no other choice but to achieve your final composition before you press the shutter release. It is possible, of course, to mask down transparencies, but this is rather troublesome.

How do you go about filling the Leica frame with precise composition and the exact area of the subject matter you are after? Leica lenses and accessories come to your rescue. Suppose you want to do a close-up. You could perhaps tackle it by using your 50mm lens at 3½ feet and then blow up a section of the negative. This is possible, but you will suffer quality loss in the final print. A better idea is to have a Dual-Range Summicron and come in closer to fill the frame. Or, you could use one of several close-up accessories like the SOOKY, BOOWU, etc., which can be used with other Leitz lenses. The Bellows Focusing Device fitted with 135mm Hektor is another magnificent tool for close-ups, producing pictures from infinity to life-size (1:1) ratios.

What about portraiture? Of course, it is possible to use a 50mm focal length to do the job. But, in order to fill the frame, you will have to come in to about 3½ feet to get a full head with a little bit of shoulder showing. But this will produce an unnatural perspective. A better picture will be made from farther away, about 6 feet or so. But from this distance with a 50mm lens you would have to crop out a small section to get a head-and-shoulders portrait. The solution is to use a lens of longer focal length: 85-, 90-, 125-, or 135mm. In this way, you will not only fill the frame but also obtain a portrait with natural perspective. In addition, at the same distance and f/stop, a long focus lens will offer a shallow depth of field which will eliminate a busy background by throwing it out of focus. The result is a more pleasant picture. The advantages of owning lenses of several focal lengths are many. For one, you can fill the frame precisely so as to achieve the maximum quality. For another, it is not always possible to change your camera position to come in close to your subject. No cropping can duplicate the results to be had from equipment designed to produce precise, full-frame pictures.

don't be proportion's slave

Getting back to Cartier-Bresson's statement, I do not feel that attainment of the exact 1 by 1½ inch proportion of the Leica negative should *always* be your goal. If the content of your subject matter is best expressed by some other proportion – such as 5 by 14 inches in the print, then the 35mm negative should be cropped down to that size in the enlargement. *But decide the cropping of the print while you are still investigating your subject in the viewfinder!* I feel that form should never restrict content. It is absurd to believe that one should follow the 35mm format just because it exists. It is not necessarily, nor should it be, the correct proportion for *every* picture idea, any more than a square, or other rectangle is. What you see and what you want to express should decide the format. In other words, if your photograph is best expressed by cropping down to 5 x 14 inch shape, (and this type of creative framing is what I like to call "the total reality of your vision") that should be the shape of your final print. Color transparencies, can be masked down to block out areas that may disturb the purity of design and composition.

But I re-emphasize that you must shoot for the maximum useable negative area to realize maximum print quality. When composing for a long, narrow print, fill the long dimension of the viewfinder completely. When you train yourself to fill the frame always and only with *essential* detail, either by changing the camera position or the lens, you will also be training your eye to see in an aesthetic sense. You will learn to eliminate unnecessary detail, attain tight composition and, thereby, strengthen the expressive content of your photographs.

Even though you will probably never own all the accessories and lenses available, (much less carry them all on every picture-taking session), you must learn to use all you have to the fullest extent. Do not lean on the crutch of cropping out small negative areas except in real emergencies. The discipline of careful composition *in the viewfinder* will pay you back a thousand times in better grain, resolution, contrast, gradation and detail – and train you to "see" better pictures in the bargain!

"the face of Missouri"

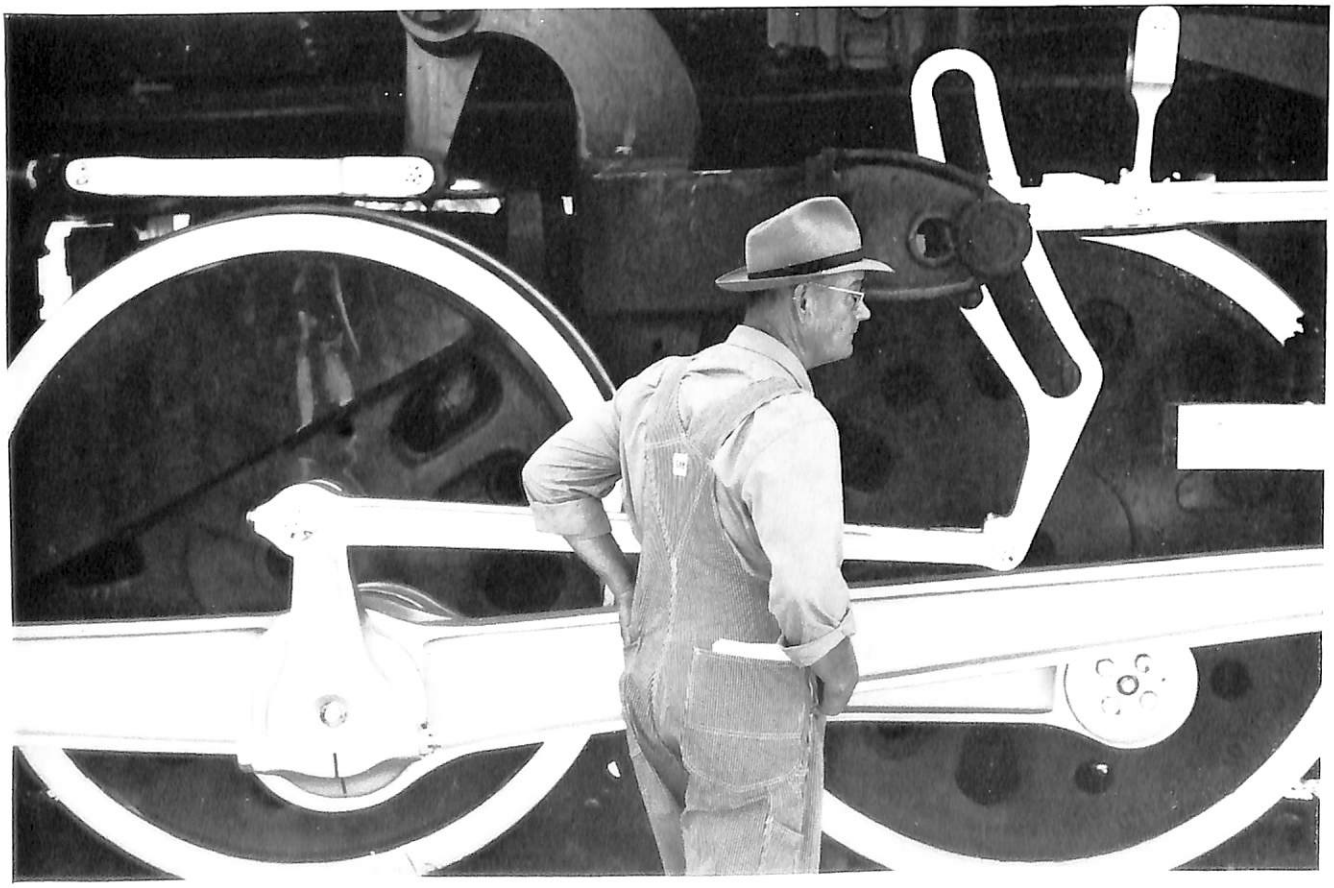
a selection of pictures from the book.

"THE FACE OF MISSOURI" by Elio Lee Battaglia, 96 photographs, 112 pages, with an introduction by the photographer. 9 x 11¼ inches. University of Missouri Press, $7.50.

Elio Lee Battaglia is an Assistant Picture Editor for the National Geographic Magazine who is also a perceptive and expert photographer. He arrived in this country from Italy only 11 years ago, and has since then served with the U.S. Army in Japan and Korea, received the Bronze Star for valor, become a U. S. citizen, studied photography, worked as a laboratory assistant for Time, Inc., travelled the world as a ship's photographer, free-lanced in Europe and taken two degrees in Journalism at the University of Missouri.

While working for his Master's degree, he was asked to portray the people of Missouri with his camera for a book to be published by the University of Missouri Press. The book, completely illustrated with a Leica and the Summicron "team" of 35mm, 50mm Dual-Range and 90mm lenses, will appear later this fall. "The Face Of Missouri" contains 96 Leica illustrations, with a five-page introduction by the author. The photographs show us a fascinating, heterogeneous people — city dwellers, back-country

Iron horse, Sedalia



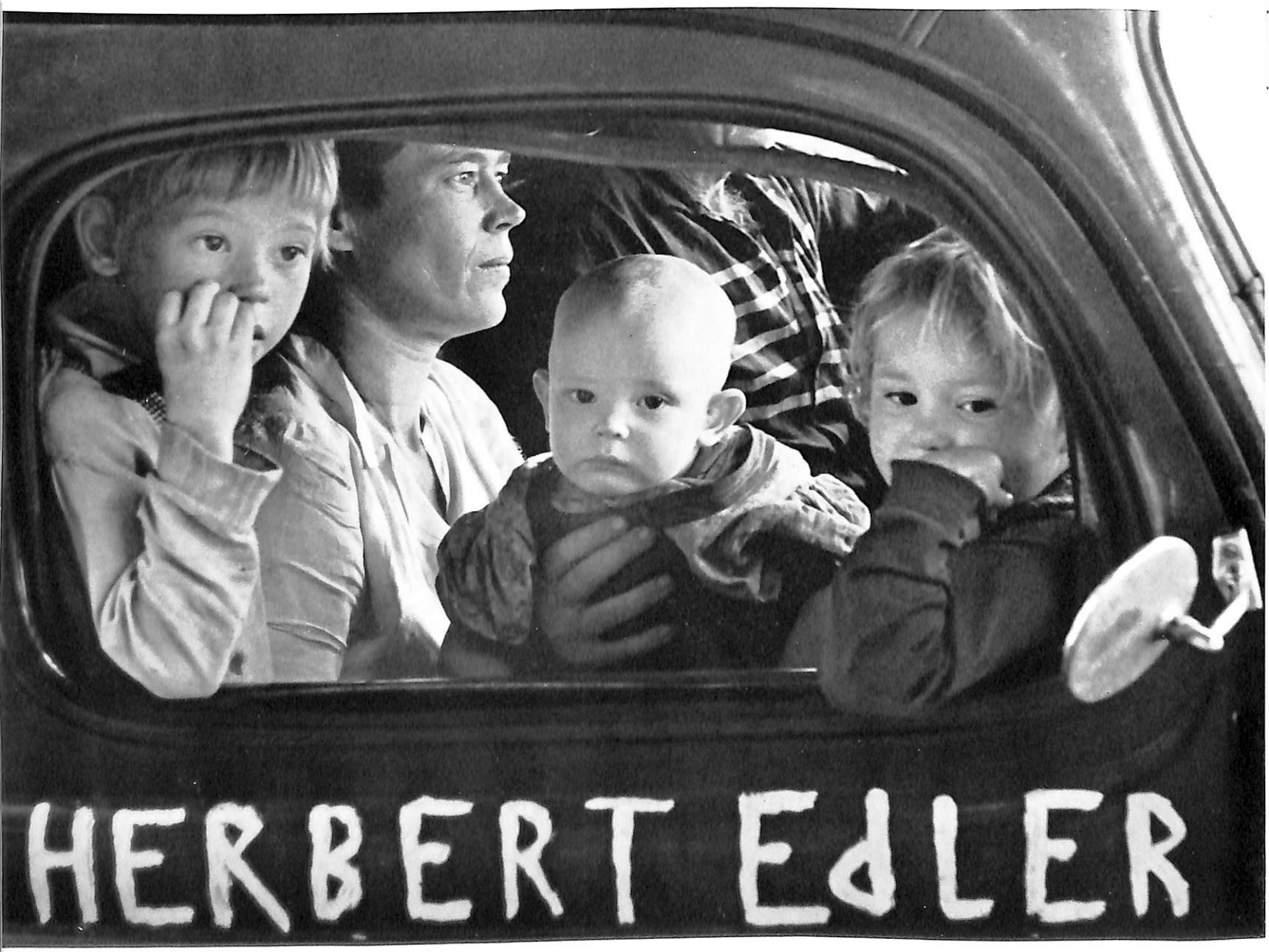
state fair, Sedalia

farmers, housewives, policemen, Trappist monks, teen-agers, Amishmen — a microcosm of America but with a special Midwestern flavor. In the book's introduction the photographer says, "These pictures do not tell all the truth about Missouri; they are not intended as a comprehensive survey of the state or to show what is 'typical' of the state. No effort has been made to give equal representation to all sections of the state. What the pictures do represent is a small portion of what one personality found memorable and meaningful in Missouri in 1960."

Mother and son, Columbia

Cafe, St. Louis

"the face of Missouri" *(continued)*



Farm family, Herman

Amish men, Bowling Green

one scale, many uses / *Bruce Joseph*

do you ignore the depth of field indicator?

In any picture, objects both in front of and behind the distance actually focused on will appear sharp. The distance from the nearest to the farthest objects which appear sharp is called the depth of field, and it increases as subject distance increases and as lens aperture decreases. Another important factor is the circle of confusion, which is used in determining the depth of field, but whose functions are beyond the scope of this article. *(See Leica Photography, Volume 13, No. 1, p. 10 for a brief discussion of "image-points" . . . Ed.)*

Pioneer Leica owners determined the subject distance with a non-coupled accessory rangefinder and transferred the setting to the camera's focusing scale. To check the depth of field, they had to consult tables, since no such scale was marked on the lens mount. This scale was added at about the time interchangeable lenses were introduced, and made Leica photography quicker and more convenient.

Camera operation was speeded still more by the arrival of the built-in, coupled rangefinder. Leica users no longer needed to set focus on the scale, or even take the camera from their eyes to refocus. But, in not consulting the focusing scale, many no longer consulted the depth of field scale either, preferring instead to depend on the inherently great depth of field provided by the lenses used in 35mm photography. So, many of us now tend to forget that the depth-of-field scale exists.

But it does. And it performs several valuable picture-making functions which would involve complicated mathematics or checking of tables if the scale weren't there.

Working as a team with the focusing scale, the depth of field scale helps you to make the best settings for:

ZONE FOCUSING

This technique is for fast shooting without refocusing between pictures, such as in action sequences, capturing the "decisive moment," and so on. Having determined the near-and-far side depth needed to cover action within the picture area, you can quickly see which aperture will be necessary to provide this depth.

MAXIMUM DEPTH OF FIELD

One specific focus setting called the hyperfocal distance, provides the greatest foreground-to-infinity depth of field for a given lens aperture. The setting is different for each aperture and focal length. Without the depth of field scale, this setting would have to be looked up in a table or laboriously calculated. With the scale it can be set in seconds.

CONTROLLED DEPTH OF FIELD

Many pictures call for a specifically limited depth of sharpness. Portraits, for instance, need only a few inches. And interiors scarcely need sharpness that extends to infinity! In these special situations the scale is invaluable, since it shows instantly which lens aperture to use to meet the specific needs of the picture.

In some cases, your shutter speed may have a lower limit — say 1/50th of a second determined by the amount of action in the picture area. The scale can tell you whether the aperture recommended by your meter for this speed will provide the necessary depth, or whether you will have to increase the depth by increasing camera-to-subject distance or other means.

At still other times, you may want to concentrate all the depth in front of the actual subject focused on. Or behind it. In either case, your depth of field scale can help you solve the problem instantly.

most common use

Most of the time you will use the scale to check the nearest and farthest subjects which will be in focus at the aperture you intend to use. You can thus be sure that important picture areas will all be very sharp. To do this, first use the rangefinder to check nearest and farthest distances, then focus on your principal subject. Then glance at the depth of field scale. Aperture numbers to the left (as seen from above) of the triangular indicator which indicates the distance to which the lens is focused show the depth in front of the focus plane; to the right, they show the rear depth.

For instance: in Figure 1 the lens is focused at 15

Fig. 1. FOCUSED AT 15 FEET, 50mm lens gives sharp image from about 10 to 30 feet at f/8, 9 to 75 feet at f/11, etc. Best settings for zone or selective focusing can be quickly found.

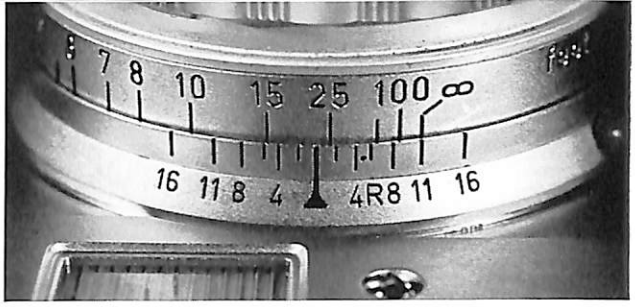


Fig. 2. HYPERFOCAL DISTANCE SETTING for a given stop is set automatically when *far-side* aperture mark for that stop is set at infinity mark on focusing scale. Setting here is for f/11.

feet. Lens shown is a 50mm. The scale shows, at the near- and far-side f/8 aperture markings, that everything from just over 10 feet to about 30 feet will be sharp. At f/5.6, (mark between f/8 and f/4) the near-side depth would go to about 12 feet, and would reach to about 24 feet on the far side. And so on. The scale is as important in choosing the best aperture for *limited* depth as for maximum depth. For a group portrait, for example, you may want to concentrate interest on the people by blurring the surroundings. A look at Fig. 1 shows that, by opening to f/2 the depth of field is only between 13½ and 17½ feet — about right for the job.

zone focusing

For unpredictable action shots, or to keep your camera ready for targets of opportunity, you can use the scale to pre-set the focus of the lens. First take an exposure reading suitable for light conditions you are likely to encounter. Let's say it recommends f/11 at 1/100th, and that this shutter speed is as low as you want to risk when making "grab" shots. A little lens-twisting and checking of your depth scale will show that, by setting focus at about 15 feet, everything from about nine feet almost to 40′ (Fig. 1) will be in focus. This setting should produce an in-focus image for very nearly any action which lends itself to grab-shooting.

hyperfocal distance

At one specific focus setting for each aperture — the hyperfocal distance — the depth of field extends just to the infinity setting of the lens (Fig. 2). No depth is wasted "beyond" infinity, as it would be with the lens focused on the far side of the hyperfocal distance. This setting is of primary use when you want maximum foreground-to-infinity sharpness — as in landscape pictures with interesting foregrounds. It is also a valuable "eveready" setting in preparing to shoot unposed pictures which may appear unexpectedly. For example, a 35mm lens at f/11 set at the hyperfocal distance will image sharply everything from five-and-a-half feet to infinity. At the hyperfocal distance setting, the near limit of sharpness is at half the distance focused on. Lenses of fixed-focus cameras are generally set for the hyperfocal distance. Another technique can be used when it is important to provide optimum depth either in front of or behind the subject. For instance, you may want to picture a person about 10 feet away and at the same time keep as sharp a foreground as possible, letting the background go completely out of focus. You will automatically provide an optimum focus setting for this situation by setting the chosen aperture on the far side (right, as seen from above) of the depth scale opposite the 10 foot setting on the focusing scale (Fig. 4). Depth of field with a 50mm lens will extend down to 6½ feet at f/8. If the 10 foot mark on the focusing scale were set opposite the focusing index, however, (that is, if the lens were focused on the subject distance) the near depth would extend down only to a little below 8 feet, with (in this example) unneeded sharpness extending to the zone between 10 and 15 feet.

If the maximum depth is needed *behind* the subject, with foreground sharpness unimportant, the focusing scale setting is made opposite the aperture marking on the left-hand (near distance) side of the depth scale (Fig. 3). In the case just cited, rear depth would extend from the subject at 10 feet to a distance of 25 feet, with the foreground going out of focus.

rangefinder "tabs"

An even quicker (though somewhat limited) check on depth of field, is provided by the two "tabs" on the upper and lower edges of the rangefinder area of M 2 and current M 3 Leicas. *(See Leica Photography 1958, No. 4, or camera instruction books . . . Ed.)* These show at a glance, (without taking the camera from your eye) whether or not a given object is within the depth of field at the particular focus setting you are using. One indicator is for 50mm lenses at f/16; the other is for 50mm lenses at f/5.6.

Fig. 3. MAXIMUM REAR DEPTH results when subject distance is set opposite *near-side* aperture mark on depth scale. Setting here is on 50mm lens for f/8, subject distance of 10 feet.

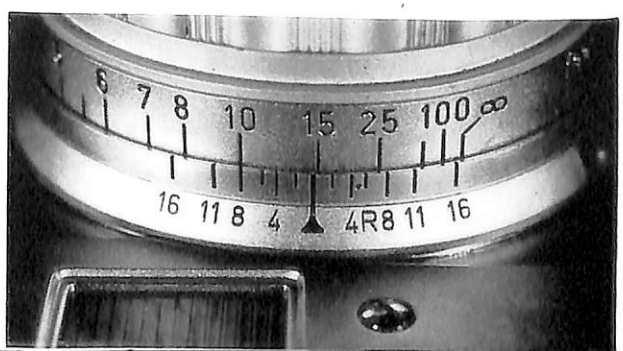


Fig. 4. MAXIMUM FRONT DEPTH calls for setting the subject distance opposite the *far-side* aperture marking. Lens, aperture and subject distance are the same as those used in Fig. 3.

focusing on...

new book. 35MM NEGS & PRINTS by Y. Ernest Satow. Amphoto, New York, 128 pp., paper bound, $1.95.

Y. Ernest Satow's articles and photographs need no introduction to readers of Leica Photography and other photo publications. He is that *rara avis* among photographers who can be considered either as a superb technician with an impeccable picture sense, or as an imaginative artist who has complete command of photographic techniques.

So, this book – illustrated with Satow's photographs – is a welcome one. It relates the technical means to the aesthetic ends of photography in a way calculated to end a good deal of groping which now exists among many photographers.

The author's views are his own, and he isn't afraid to put them into print. But he does so undogmatically, recognizing that many factors determine the photo technique of a given individual – including (glory be!) such practical things as the cost of certain materials such as developers.

Satow also discusses several important, yet too-seldom-mentioned, aspects of technique. He mentions, for instance, that temperature difference between developer, fixer and wash water can cause bad grain quality, especially in fast films, even when the difference is not great enough to cause actual reticulation. This is not exactly esoterica, but, on the other hand, too few photographers we know are aware of it as a contributor to graininess.

Photographers at all levels of skill can benefit from reading this brief but valuable book. This is one to own, read and reread.

Leitz increases production. To meet the greatly increased demand, especially for Leica cameras and equipment, and also in the fields of projection, microscopy and special apparatus for science and technology, Ernst Leitz, GmbH, Wetlzlar, have recently bought more factory buildings. To increase production facilities, a great deal of rebuilding was done, followed by the installation of up-to-the-minute tooling and stamping shops and a large automatic lathe department. The machine shops are spacious, scientifically lighted and all on ground level to insure ideal working conditions and continuous material flow. A recirculation and filtration plant for machine lubricant and cables for the electric supply are underground.

fifty years' service. The Leica camera may have just celebrated its thirty-fifth anniversary, but Miss Etta Hurvich on a day last July completed her fiftieth year with the Leitz organization. At a small luncheon in her honor, Mr. Henry Mann, President of E. Leitz, Inc., presented her with a wrist watch to mark the occasion (see photo), and read a cable from Dr. Ernst Leitz in Wetzlar in which he conveyed the wishes of the entire Leitz family and extolled the zeal and devotion with which she had reached this unusual milestone.

It may interest our readers to know that Miss Hurvich is one of several employees who are establishing a tradition of lifetime association with E. Leitz, Inc. Miss Hurvich began her career as a stenographer in the Laboratory Department in July 1910. She has done important work for many years in the Order Department and for the past six years in the Micro Division.

revised speed indexes. New film speeds have been assigned to black-and-white emulsions in accordance with the new American Standard PH2. 5-1960. The new speeds are roughly twice the former ASA indexes. But, you should be aware that the films themselves haven't changed – only the method of measuring their speeds. If you have already developed a technique for producing the kind of negatives you like, don't change it.

The reason for the change is that former speed indexes included a safety factor of about 2.5. This was included because it was desirable for use with the shutters, films and meters of the early 1940's when the original standard was adapted. Experience with today's materials and equipment shows that this margin for error isn't necessary.

Film instruction sheets now bear *two* speed figures. One is the familiar arithmetic index – anywhere from 40 to 2000 or more. The second is a number between one and ten expressed, for example, thus: 4.5°. This is a logarithmic, or Additive Value System rating, and need not concern Leica owners. At press time, at least one manufacturer (Eastman Kodak) had dropped a separate Tungsten speed listing for continuous-tone panchromatic negative films. Experience proves that the response of most exposure meters is so similar to that of pan films that the same index can be used for both daylight and the usual types of light sources.

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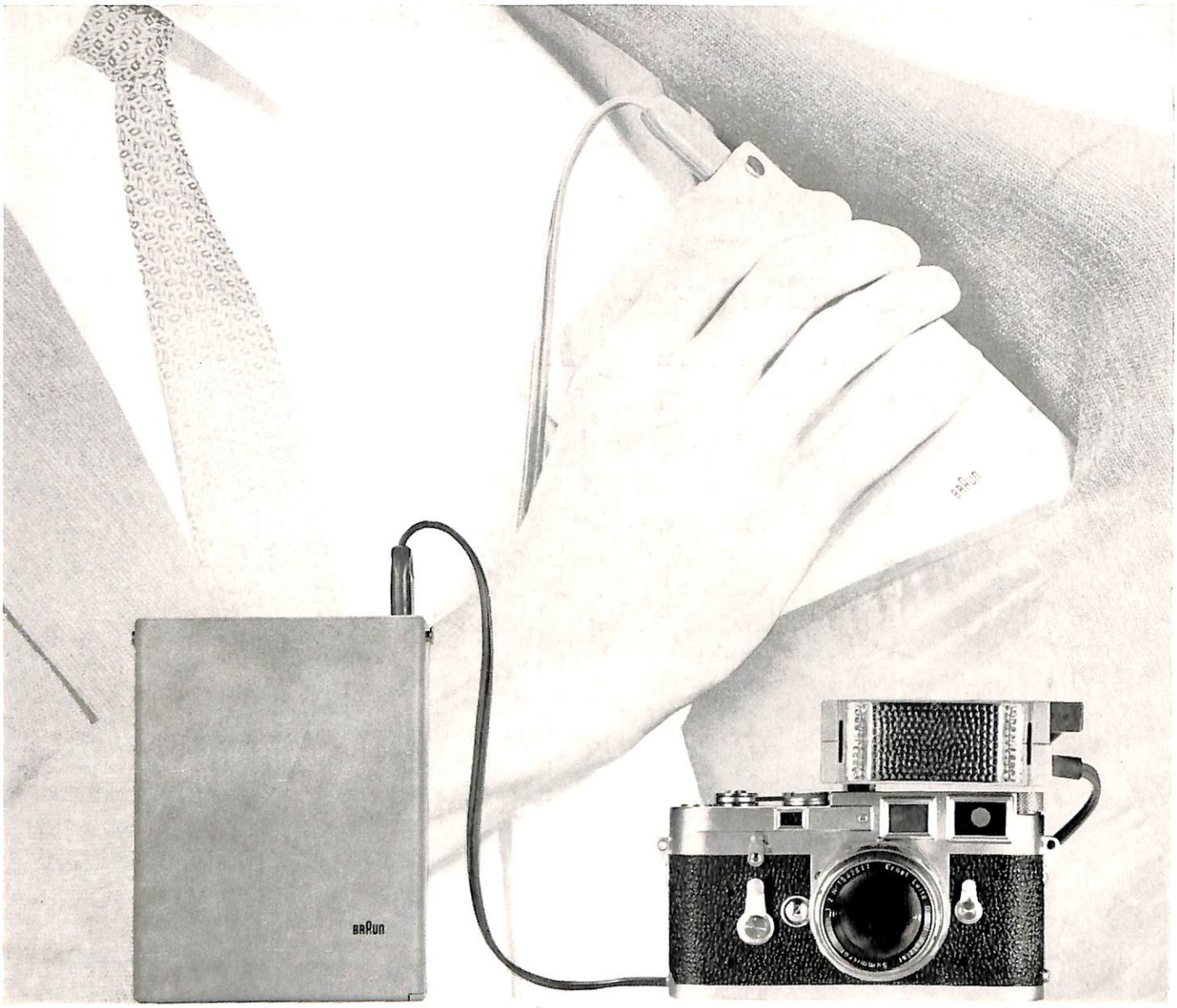

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